AMENDMENTS

In the Specification

Please replace page one (front page) of the specification with a new front page attached herewith at the end of this paper. The state of incorporation of the assignee has been corrected by this amendment. A marked-up version for the change to the state of incorporation on the front page is also submitted herewith as a separate sheet titled "Marked-up Version of Assignee Section of Front Page Showing Changes Made."

REMARKS

Claims 1-36 are now pending. The Examiner is thanked for his kind allowance of claims 1-21. The Examiner is also thanked for his kind acknowledgement of patentable subject matters in dependent claims 23-26, 28-31, and 33-36.

The 35 U.S.C. § 102 Rejection

Claims 22, 27, and 32 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Walden (U.S. Pat. No. 5,030,926). This rejection is respectfully traversed.

The circuit of the present invention defined in claim 22 includes a capacitance controller that *alternately* switches a switched-capacitor in the first capacitor array and a switched-capacitor in the second capacitor array based on the frequency control signal (emphasis added). Claims 27 and 32 also recite the same distinctive feature of alternately switching switched capacitors in two capacitor arrays.

Walden discloses a crystal oscillator circuit **100** having a pair of varactors (variable capacitors) **30** and **40** (FIG. 1). The capacitance of the varactors **30** and **40** is varied by varying an external control voltage Vc which is supplied from the input control voltage terminal **70** through a common node **35**. However, since both of the varactors **30** and **40** are connected to the common node **35**, when the control signal changes, both capacitance values of the varactors **30** and **40** change *simultaneously*. Thus, Walden neither discloses nor teaches or suggests changing capacitance values of the two variable capacitors or capacitor-arrays *alternately*, as claimed.

Walden also discloses a crystal oscillator circuit **200** including an additional pair of varactors **31** and **41** connected to another common node **36** (FIG. 2). Auxiliary control voltages V_A and V_B are developed at the common nodes **35** and **36**, respectively, from the control voltage Vc using the constant current source **71** and a MOS transistor **72** (column 3 line 66 to column 4, line 6). However, the voltages V_A and V_B only differ by the voltage drop at the transistor **72** (column 4, lines 7-8). Thus, similarly to the circuit **100** as discussed above, the capacitance values of all varactors **30**, **40**, **31** and **41** change simultaneously, though their amounts may be different. Therefore, Walden does not disclose or teach/suggest, with his circuit **200**, changing capacitance values of the two variable capacitors or capacitor-arrays *alternately*, as claimed.

Accordingly, it is respectfully requested that the rejection of claims based on Walden be withdrawn. In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Request for Allowance

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,
THELEN REID & PRIEST, LLP

Dated: July 10, 2002

Masako Ando
Limited Recognition under 37 CFR §10.9(b)

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ASSIGNED TO:

LSI Logic Corporation, a Delaware [California] Corporation

UNITED STATES PATENT APPLICATION

FOR

METHOD AND APPARATUS FOR CONTROLLING OSCILLATION AMPLITUDE AND OSCILLATION FREQUENCY OF CRYSTAL OSCILLATOR

INVENTORS:

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Client Docket Number: 01-166

BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE
UNITED STATE PATENT AND TRADEMARK OFFICE

LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

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Expires: June 11, 2003

Harry I. Moatz
Director of Enrollment and Discipline